

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017424**Date Inspected:** 15-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** Li Yang and Zhu Zhong Hai**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 10AE to 10BE (Transverse Splice T-Ribs)

This QA Inspector witnessed final bolt tension verification on bolts connecting T-Rib to T-Rib for Transverse Splice at Side Panel Bike Path Side (from work point E1 towards E3), Bottom Panel (from work point E3 towards E4) and Cross Beam side (from work point E4 to E6) between Panel Point (PP) 88 to PP 89 for Segment 10AE to 10BE. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance.

Inspection was performed against the Notification No. 00510 Dated October 15, 2010.

The bolt sizes used were M22 x 70 RC Lot # DHGM220038 and the final torque value established was 480 N-m.

The Manual Torque wrench used was Serial No. XO2-666. Please reference the pictures attached for more comprehensive details.

Segment 10AE to 10BE (Transverse Splice T-Ribs)

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This QA Inspector performed Dimension Control Inspection on the Transverse Splice T-Ribs to T-Ribs after tension verification of bolts for the Segment 10AE to Segment 10BE between Panel Point (PP) 88 to PP 89 at the following locations:

Work Point E1 towards Work Point E3 (Side Panel Bike Path Side) total 19 T-Ribs.

Work Point E4 towards Work Point E6 (Side Panel Cross Beam Side) total 19 T-Ribs.

The QA Inspector measured the Vertical Offset using 1(One) Meter Straight Edge and measured the Horizontal Offset on the web using a Bridge Cam gauge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AE (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point E3 (Bike Path side) and at Work Point E4 (Cross Beam side) for the Segment 12AE between Panel Point (PP) 111 to PP 112 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 12AW (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point W3 (Counter Weight side) and at Work Point W4 (Cross Beam side) for the Segment 12AW between Panel Point (PP) 111 to PP 112 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

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Segment 10CE

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg064A-043. The welder identification was 040265 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as Bottom Panel to Side Panel at work point E4. ZPMC performed repair welding in accordance with CWR-2045.

Segment 10CE

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as Seg064A-044. The welder identification was 040265 and observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-345-SMAW-1G(1F)-FCM-Repair-1. The piece mark was identified as Bottom Panel to Side Panel at work point E3. ZPMC performed repair welding in accordance with CWR-2045.

Segment 10CW

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as SSD25-PP093-100. The welder identification was 040656 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm at FL3 location. ZPMC performed repair welding in accordance with B-WR-15994.

Segment 10CW

This QA Inspector observed the repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as SSD25-PP093-174. The welder identification was 040656 and observed welding in the 2G (Horizontal) position using approved Welding Procedure Specification WPS-345-SMAW-2G(2F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm at FL3 location. ZPMC performed repair welding in accordance with B-WR-15995.

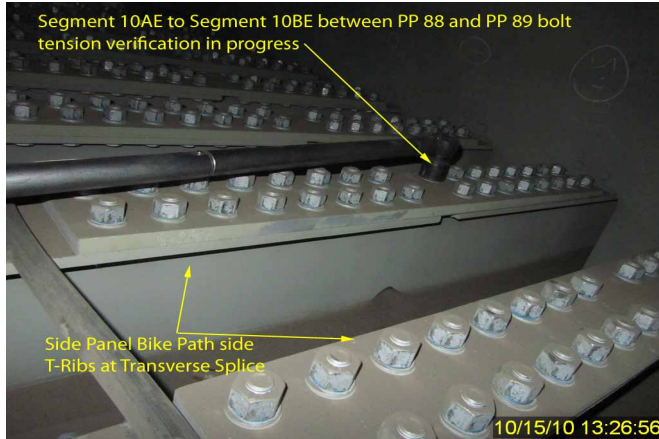
Segment 10CW

This QA Inspector observed the in-process repair welding by Shielded Metal Arc Welding (SMAW) process on a Complete Joint Penetration (CJP) groove weld. The weld joint was designated as SSD25-PP093-047. The welder identification was 046709 and observed welding in the 4G (Overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G(4F)-FCM-Repair-1. The piece mark was identified as partial height diaphragm at FL3 location. ZPMC performed repair welding in accordance with B-WR-15998.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer